

No. 753,707.

PATENTED MAR. 1, 1904.

R. ILLEMAN.
FIREPROOF BUILDING BLOCK OR SLAB.

APPLICATION FILED JUNE 1, 1903.

NO MODEL.

2 SHEETS—SHEET 1.

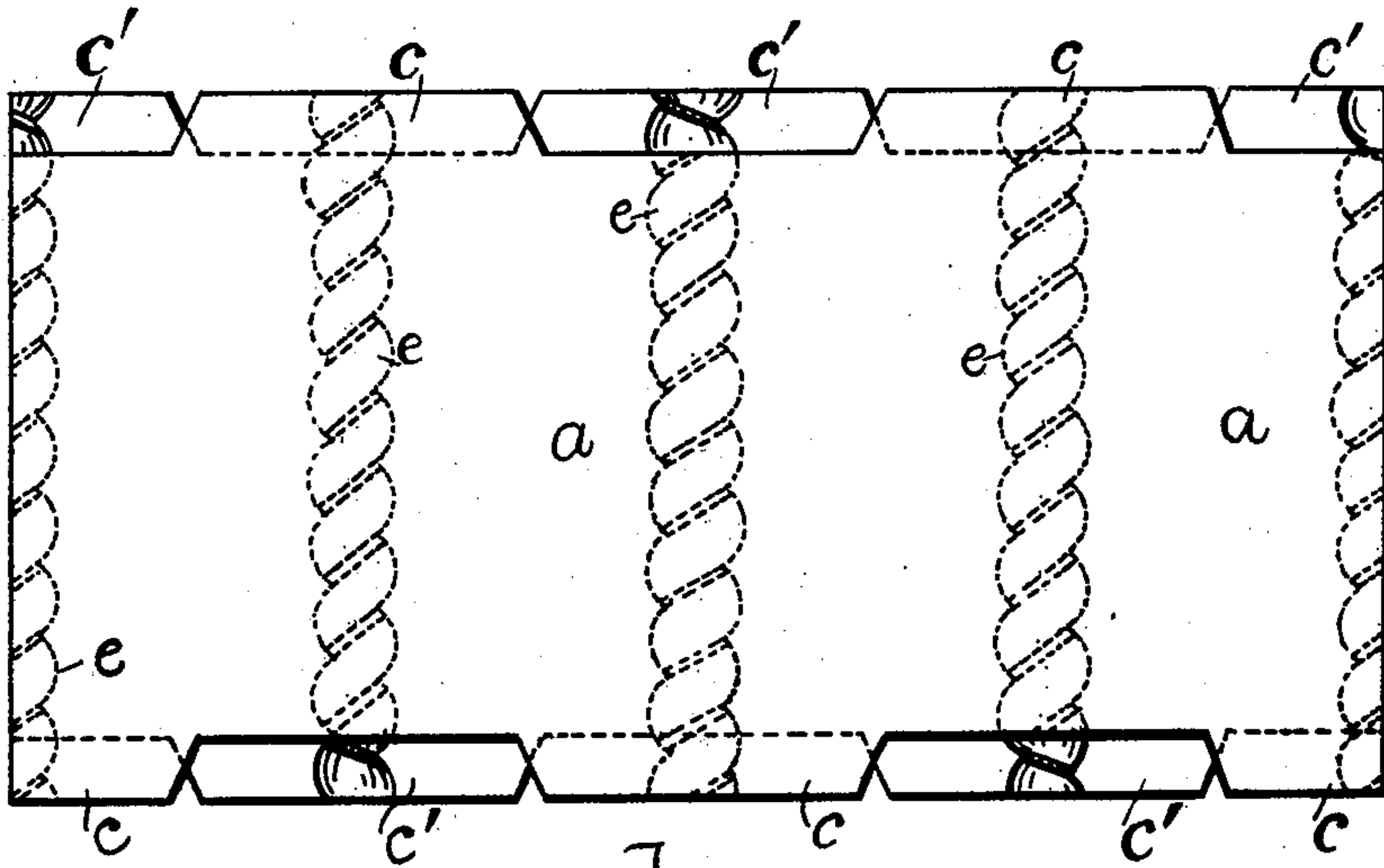


Fig. 1

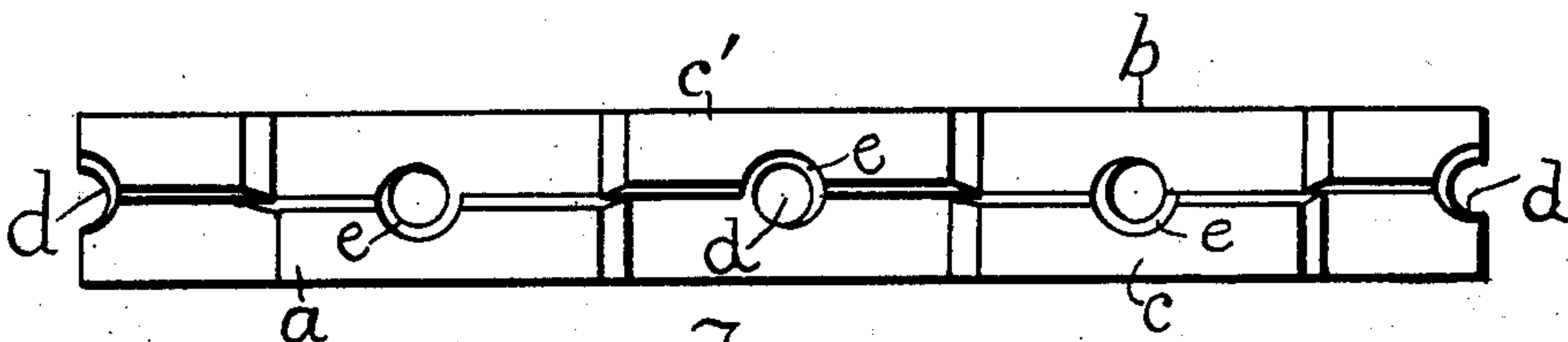


Fig. 2

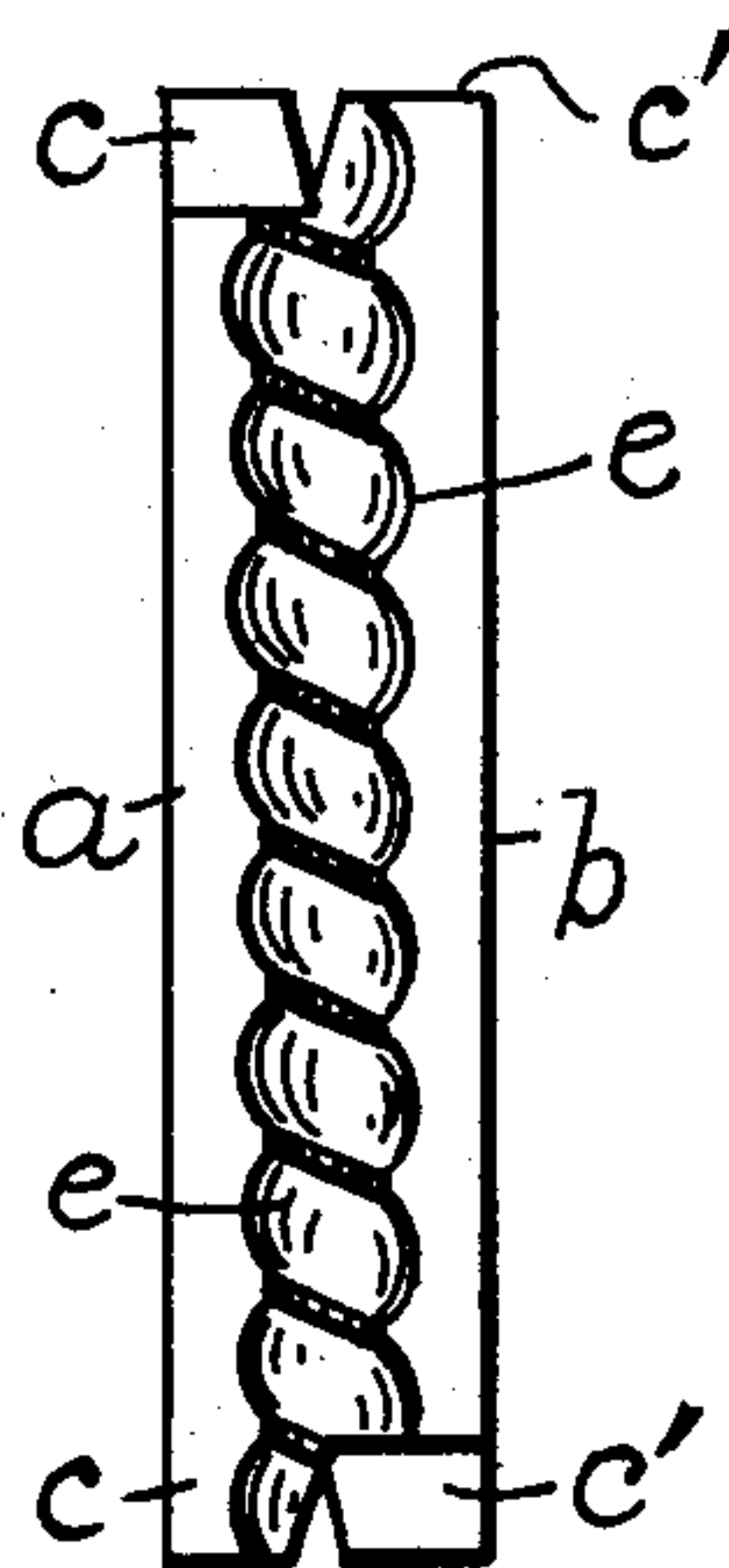


Fig. 3

Witnesses:

Fred W. Engler,
Geo. A. Dym.

Inventor:

R. Illeman.
by W. H. Kinman + Fisher
his Attorneys.

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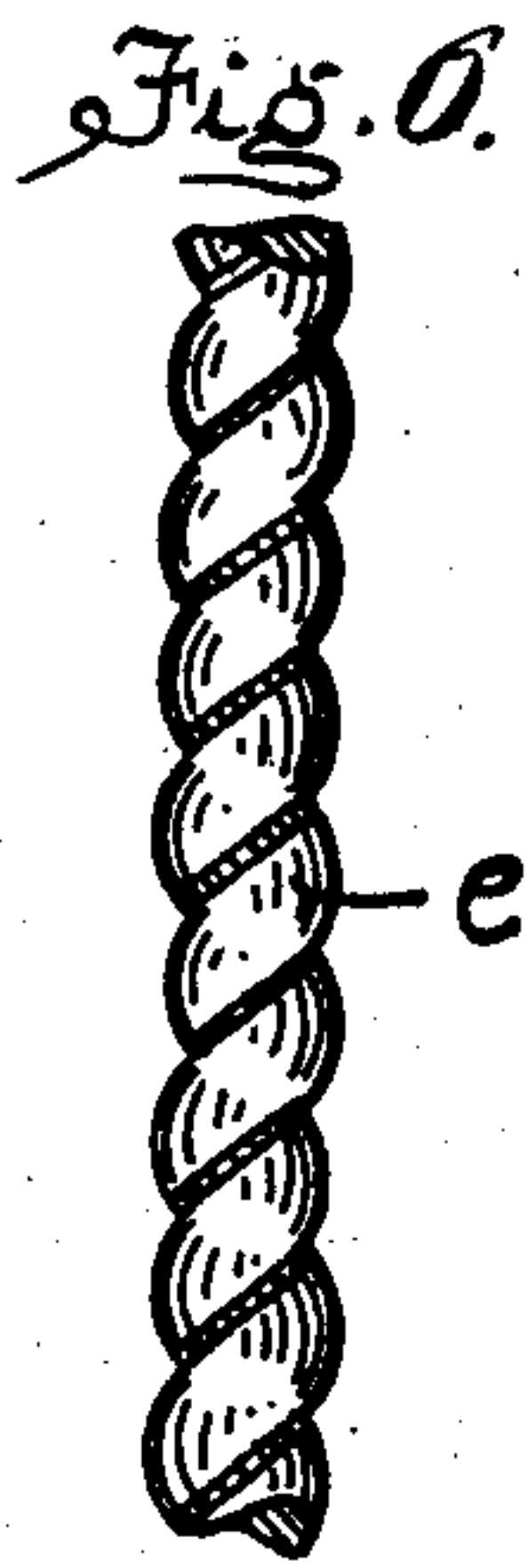
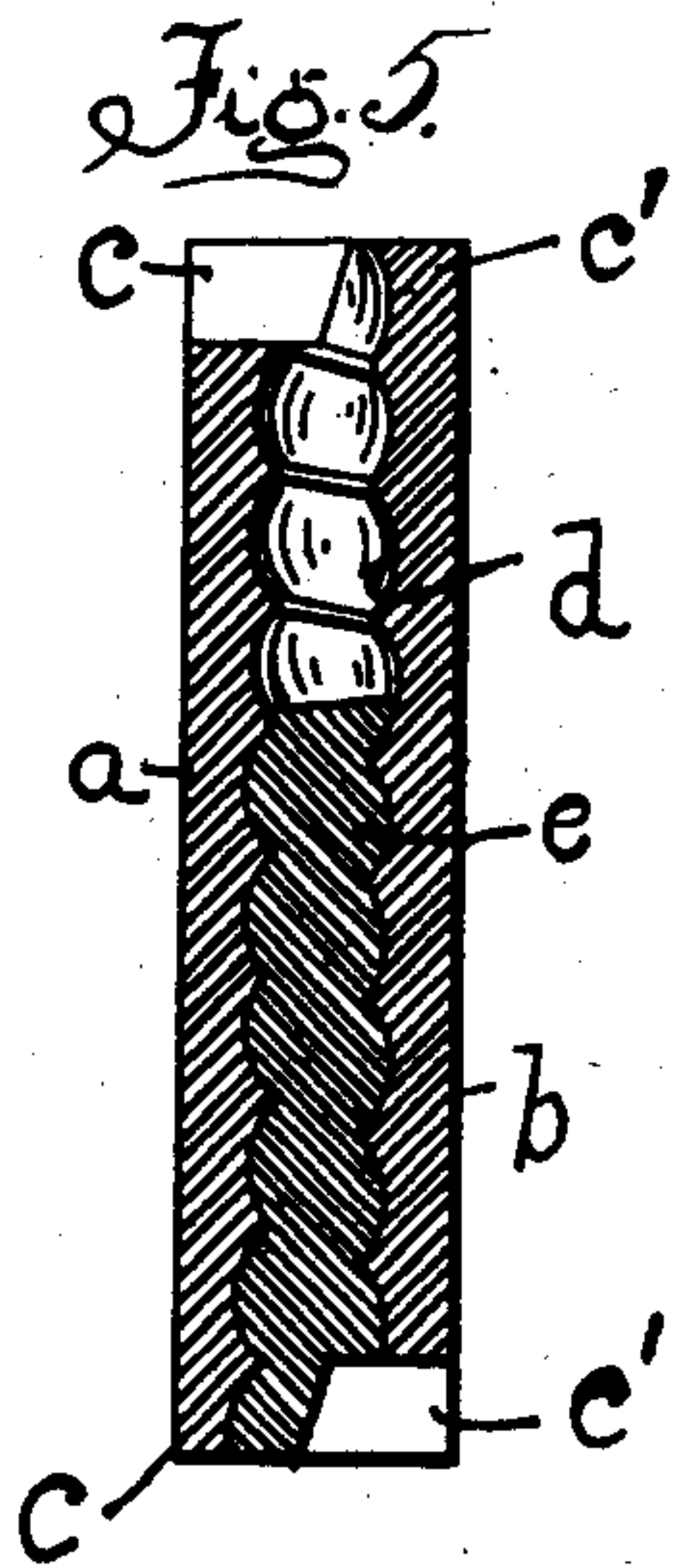
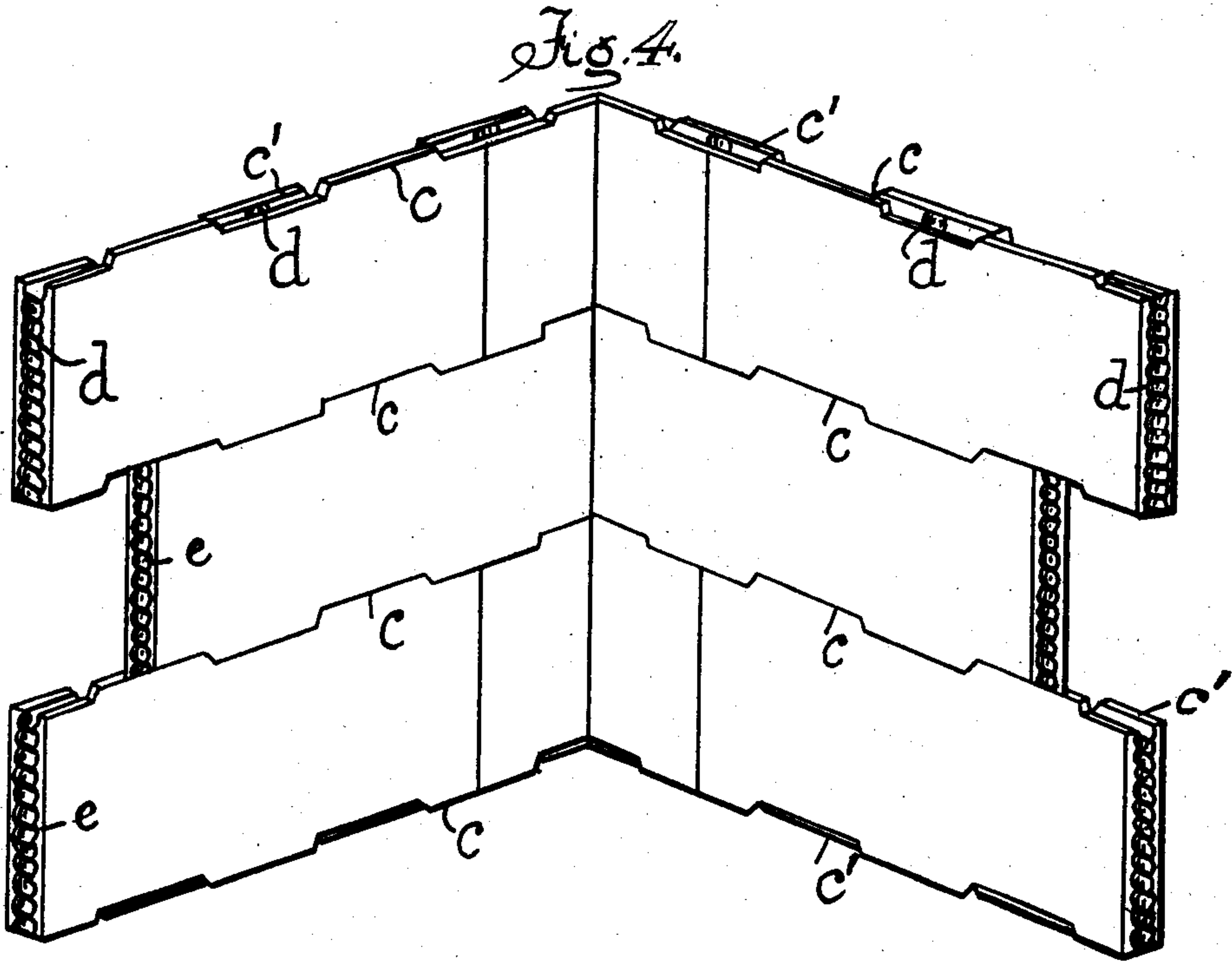
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2 SHEETS—SHEET 2.



Witnesses.
Geo. W. Engler
Geo. F. Byrne

Inventor:
R. Illeman.
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UNITED STATES PATENT OFFICE.

ROBERT ILLEMANN, OF LONDON, ENGLAND, ASSIGNOR TO FREDERICK MALCOLM HURDIS JONES, OF KENTISH TOWN, COUNTY OF LONDON, ENGLAND.

FIREPROOF BUILDING BLOCK OR SLAB.

SPECIFICATION forming part of Letters Patent No. 753,707, dated March 1, 1904.

Application filed June 1, 1903. Serial No. 159,703. (No model.)

To all whom it may concern:

Be it known that I, ROBERT ILLEMANN, a citizen of the United States, residing at 371 Euston road, London, England, have invented certain new and useful Improvements in Fireproof Building Blocks or Slabs for Walls, Ceilings, Partitions, and the Like; and I do hereby declare the following to be a full, clear, and exact description of the invention, such as will enable others skilled in the art to which it appertains to make and use the same.

Blocks or slabs to be used for the purpose of building walls, partitions, ceilings, and the like have been made in the form of rectangular blocks or slabs of sufficient thickness arranged in rows edgewise above one another vertically, so as to form a surface of any desired size, grooves semicircular in plan being made in the vertical edges of each slab, so that when fitted together they form vertical cylindrical holes into which suitable liquid cement is poured. The slabs are arranged so that their vertical edges break joint with each other, and a cylindrical vertical hole is also made through the center of each slab, so that when the slabs are arranged to break joint as described the cylindrical hole through the center of each slab comes directly above the holes formed by the semicircular grooves in the ends of the adjoining slabs above and below, continuous holes being thus formed from top to bottom of the wall or other surface. Through some of these holes bolts are passed. The slabs have also been formed with a central groove along one of their horizontal edges and a corresponding rib along the other horizontal edge. This method of construction and arrangement, however, has some disadvantages, especially in the slabs not being sufficiently strongly held together transversely, while the plain columns of cement in the vertical holes are insufficient to firmly hold the several courses of the slabs together vertically, and my present invention has for its object to provide fireproof slabs for walls, partitions, ceilings, and the like, by means of which extremely strong and durable constructions are obtained, inexpensive, and easily put together, and when completed im-

movably fixed and locked in every direction. The accompanying drawings are in illustration of my invention.

Figure 1 is a side view of a slab used in building a wall. Fig. 2 is a view of the same from above, and Fig. 3 an end view. Fig. 4 is a perspective view of two walls meeting at right angles. Fig. 5 is a vertical section through a slab, and Fig. 6 is a view of part of one of the columns of cement removed from the slab.

The blocks are formed of any suitable material or composition—such, for instance, as plaster-of-paris—capable of setting into a perfectly hard state when dry, which is poured, in a more or less liquid state, into molds, from which when dry and set hard the slabs or blocks are removed ready for use.

I manufacture each block, as shown in the figures, rectangular in shape upon its front and back faces *a* and *b* and of suitable thickness and dimensions, and upon its upper longitudinal edge I form projections *c c c*, extending through half the thickness of the slab from the front and back, respectively, and projecting vertically upward for a sufficient height. Two of these projections are formed above the front face of the slab, each projection being about one-quarter of the length of the slab and leaving a central space of the same length between their ends, so that their outer ends are each one-eighth of the length of the slab from the ends of the latter. Similar projections (see *c' c' c'*) are made at the top of the back face of the slab and they alternate with those at the front, so that there is one at the center having a vacant space of equal length at each end and a projection at each end of the slab equal to half the length of the central projection, or one-eighth of the entire length of the slab.

The lower edge of the slab is provided with downward projections similar to those above, but also arranged alternately and so that each projection is directly below a corresponding vacant space between the projections in the upper edge. By the method of construction described when the several slabs are fitted together one above the other upon

their edges the projection c' below the upper slab fits into the spaces between the projections c above the lower slab upon both edges, and as the projections and spaces upon those at one edge alternate with and are opposite to those upon the other edge all the slabs are securely and immovably interlocked together, so that they cannot move from each other either transversely or longitudinally, and a solid flat wall or surface is obtained alike upon both sides. The flat wall or surface so obtained may be of any desired dimensions, and obviously it may not only be used in a vertical position to form walls or partitions, but horizontally for ceilings or the like or in any desired inclined position.

At each vertical edge of the slab I make a central vertical recess d , so that when the ends of two slabs adjoin each other the two recesses form a vertical hole, and I also make vertical holes d through the center of each projection and each intermediate vacant space. All these vertical holes, both in the body of the slabs and at their edges from top to bottom of the wall, are then filled with liquid cement, which when set hard makes the entire wall practically a solid block.

I do not make the central vertical holes through the slabs and at their ends plain or simply cylindrical on their inner surface, but I form them with one or more helical recesses forming a hollow screw or screws e , into which the liquid cement is poured, so that when it is set hard it forms a solid screw fitting accurately into (so as practically to form a part of) the helical recesses or screw-threads in the holes through the slabs and at their ends, and the strength of the entire mass is in this way greatly increased.

Instead of running vertically through the slabs the holes with interior helical recesses may be made more or less diagonal. Any

number of helical recesses may be made and of any desired pitch and shape in section, and instead of forming parallel screw-threads the latter may be of greater diameter at one end than at the other end, so as to form hollow spiral helices.

In front view as well as in end view the ends of the projections above and below are made somewhat beveled or inclined, as shown, to facilitate their fitting together, and the details and proportions of the slabs may be varied more or less—for instance, a larger number than shown of the projections above and below may be used and the diameter of the holes and the size of the helical recesses in them may be varied.

What I claim as my invention, and desire to secure by Letters Patent, is—

1. A building block or slab having one or more openings passing therethrough from the top to the bottom, said openings being made in the form of helical grooves or recesses, substantially as described.

2. A building block or slab having its top and bottom edges provided with projections at its front and back arranged alternately in relation to each other so that the projections on the front edge are opposite the spaces on the back edge, the projections and spaces being approximately of the same size and shape so that they may fit freely into each other, said block or slab being also provided with one or more openings passing therethrough from the top to the bottom made in the form of helical grooves or recesses, substantially as described.

In testimony whereof I affix my signature in presence of two witnesses.

ROBERT ILLEMANN.

Witnesses:

A. BROWNE,
A. E. VIDAL.